

Appl. No. 09/742,229  
Norrel Docket Number 11958ROUS01U  
Attorney Docket No. 123-005

## AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of the claims  
in this application:

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (Canceled)
7. (Canceled)
8. (Canceled)
9. (Canceled)
10. (Canceled)
11. (Canceled)
12. (Canceled)
13. (Canceled)
14. (Canceled)
15. (Canceled)
16. (Canceled)
17. (Canceled)
18. (Canceled)
19. (Canceled)
20. (Canceled)
21. (Canceled)

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- 22. (Canceled)
- 23. (Canceled)
- 24. (Canceled)
- 25. (Canceled)
- 26. (Canceled)
- 27. (Canceled)
- 28. (Canceled)
- 29. (Canceled)
- 30. (Canceled)
- 31. (Canceled)
- 32. (Canceled)
- 33. (Canceled)
- 34. (Canceled)
- 35. (Canceled)
- 36. (Canceled)
- 37. (Canceled)
- 38. (Canceled)
- 39. (Canceled)
- 40. (Canceled)
- 41. (Canceled)
- 42. (Canceled)
- 43. (Canceled)
- 44. (Canceled)

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45. (Canceled)

46. (Canceled)

47. (Canceled).

48. (Canceled)

49. (Canceled)

50. (Canceled).

51. (Canceled)

52. (Canceled)

53. (Canceled)

54. (Canceled)

55. (Canceled).

56. (Canceled)

57. (Canceled)

58. (Canceled)

59. (Currently amended) The source node of claim ~~58~~ 60 wherein said logical relationship is an adjacency relationship determined according to a round-robin selection process of channels of said particular multi-channel link.

60. (Currently amended) ~~The A~~ source node of claim ~~58~~ further having a plurality of multi-channel links connecting to core nodes in a network, each of said links comprising a respective plurality of channels, said source node operable to:

determine, for each multi-channel link in said plurality of multi-channel links:

a first merit index based on a known propagation delay along said each multi-channel link, said first merit index having a first upper bound corresponding to

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a lowest propagation delay;

a second merit index determined based on a current vacancy of said each multi-channel link, said second merit index having a second upper bound corresponding to full vacancy in said multi-channel link; and

a composite merit index determined as a sum of said first merit index and said second merit index;

retain, in a control table, an identifier of a last-used channel in each of said multi-channel links for each data stream from among a plurality of data streams originating from said source node;

receive a data unit belonging to a particular data stream from among said data streams;

select a particular multi-channel link from among said plurality of multi-channel links according to a desired distribution of data streams over the plurality of multi-channel links;

ascertain, using said control table, a particular last-used channel by said particular data stream in said particular multi-channel link; and

transmit said data unit over a particular channel in said particular multi-channel link, said particular channel bearing a logical relationship to said particular last-used channel.

61. (Previously presented) The source node of claim 60 further operable to select said particular multi-channel link according to said composite merit index of said each multi-channel link.